I CLAIM:

1. An apparatus for conducting buccal dissolution tests comprising:
   a) a cell;
   b) a supply of a release medium that can be continuously passed into said cell;
   c) a means of removing a sample from said cell such that any undissolved solids are not included in said sample;
   d) a means of analyzing said sample for substances of interest in the test;
   e) a means of controlling the temperature of the release medium in said cells;

wherein said cell is capable of transferring solid particles out of said cell;
wherein said solid particles are of small particles size;
wherein said cell has a means of adding test materials;
wherein said cell has a means of mixing the sample and release medium;
wherein said means of analyzing the effluent can be carried out at multiple times during the operation of the test equipment.

2. A dissolution test method for use with the apparatus of Claim 1, comprising the steps of:
   a) passing a release medium through the cell;
   b) adding the test sample to said cell;
   c) passing release medium through said cells such that any undissolved portion of the test sample is transferred out of the cell;
   d) removing samples of the release medium from the cell, such that they do not contain any undissolved material;
   e) maintaining the temperature of said cells at the desired temperature for the duration of the test;
   f) analyzing the effluent from said cells to determine the concentration of substance dissolved from the test sample.

3. A dissolution test method for use with the apparatus of Claim 1, comprising the steps of:
   a) passing a release medium through the cell;
   b) adding the test sample to said cell;

c) passing release medium through said cell(s) such that any undissolved portion of the test sample is transferred out of the cell;

d) removing samples of the release medium from the cell, such that they do not contain any undissolved material;

e) maintaining the temperature of said cell(s) at the desired temperature for the duration of the test;

f) analyzing the effluent from said cell(s) to determine the concentration of substance dissolved from the test sample, wherein further, the flow rate of release medium and volume of liquid in the cell is constant throughout the test, further provided that the flow rate of the release medium, the temperature of the release medium, the volume of liquid in the cell, and the amount of test sample are adjusted to give physiologically relevant conditions.